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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/399,678	09/21/1999	DUANE L. ABBEY	98CR023/KE	2540

7590 02/22/2006

ATTENTION: KYLE EPPELE
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400 COLLINS RD NE
CEDAR RAPIDS, IA 52498

EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/399,678

Applicant(s)

ABBEY, DUANE L.

Examiner

Jean B. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/6/06.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26,29-32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 1-12,26,29-32 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16,20 and 25 is/are rejected.
- 7) ☒ Claim(s) 17-19 and 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Affirmation of the election of claims 13-25 is acknowledged.

Claim Rejections - 35 USC § 112

2. The 112 first paragraph rejection of claims 13-25 has been withdrawn in view of the applicant's comment indicating that fig. 2 represents an example of recursive integrator stage.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13, 14, 20 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al US patent No. 5,732,002.

As per claim 13, Lee et al discloses a an apparatus fig. 3 comprising a data rate change component 70 a first integrator structure 42 comprising a recursive integrator stage 42; said first integrator structure 42 receiving data at a rate established by said data rate change component 70, said first integrator structure 42 inherently modifying data received from said data rate change component 70; wherein the predecimated integrator filter section output data that would be output by a post decimated integrator filter section having an equal number of integrator stages see fig. 2 showing a

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postdecimated integrator structure, note at col. 4, lines 29-32 Lee teaches that fig. 3 is the same as fig. 3 except that the decimators are replaced by Interpolators, i. e, the output 68 of both circuit is the same, in addition note the gain of each amplifier element in fig. 3 is the same as the gain of the amplifier element in fig. 4 it another indication that both outputs are the same.

As per claim 14, note that Lee further discloses a second integrator structure 44 having one stage.

As per claim 20, Lee further teaches a further step of executing a second integration procedure on data output by said first integration procedure using one recursive integrator 44.

As per claim 25, the performing procedure includes combining procedure to further modifying data received at the changed data rate see fig. 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al US Patent No. 5,732,002 in view of Kub et al US Patent No. 5,781,063.

As applied to claim 13 above, Lee et al discloses every feature of the

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claimed invention but does not explicitly teach first integrator structure comprising a plurality of multipliers. Kub et al discloses a plurality of multipliers as part of an integrator structure see fig. 5. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Lee in order to enhance signal processing.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al US Patent No. 5,732,002 in view of Sasaki et al, US Patent No. 5,570,379.

As applied to claim 13 above, Lee et al discloses every feature of the claimed invention but does not explicitly teach the data rate comprises a S/P converter. Sasaki et al teaches a rate converter 114 comprising a S/P converter see col. 6, lines 14-16. Given that fact, it would have been obvious to one skill in the art to implement the rate changer as a S/P converter as suggested by Sasaki et al as S/P converters are easy to implement.

8. Applicants arguments filed on 1/6/06 with respect to the art rejection of claims 13-16 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lee et al above.

Allowable Subject Matter


9. Claims 17-19 and 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2637

2-17-06